IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A circuit for providing power to a load with a pre-determined specification, comprising:

a transformer having a primary winding and a secondary winding, said secondary winding being part of a resonant circuit;

first and second load connection nodes for coupling of the load in series to the secondary winding;

a switch coupled in series to the primary winding, an on-time and an off-time of the switch being controllable by a control element, for generating a voltage pulse over the primary winding; and

a diode directly coupled in parallel to the primary winding for demagnetizing the transformer during the off-time of the switch, the on-time and the off-time of the switch being

predetermined.

2.(Previously Presented) The circuit according to claim 1, further comprising a capacitor connected in parallel to the secondary winding for adjusting a resonance period of the resonant circuit.

3.(Previously Presented) The circuit according to claim 1, wherein the transformer has a couple factor which is smaller than one.

4.(Previously Presented) The circuit according to claim 1, wherein the control element is selected to cause the on-time of the switch to be at least half of a resonance frequency of the resonant circuit.

5.(Previously Presented) The circuit according to claim 1, wherein the control element is selected to cause the off-time of the switch to be sufficient to reduce a current in the diode to substantially zero during demagnetization of the transformer.

6.(Previously Presented) The circuit according to claim 1, further comprising a resistor connected in series to the diode to reduce the off-time.

7.(Previously Presented) A method for providing power to a load, comprising the acts of:

applying a number of voltage pulses to a primary winding of a transformer so as to produce each time a high-voltage pulse on a secondary winding of the transformer, wherein the high-voltage pulse is shaped by transformer inductances and capacitances at a secondary side of the transformer to create a load pulse;

applying the load pulse to the load; and

providing, between every application of a voltage pulse, a current path through a diode directly connected between the primary winding for primary current so that the transformer is demagnetized and saturation of the transformer is prevented.

8.(Previously Presented) The method according to claim 7, wherein the load is a high-intensity discharge lamp, the method

further comprising the acts of:

applying a first series of pulses to ignite said high-intensity discharge lamp, and

applying a second series of pulses to operate the high-intensity discharge lamp during an electrode heating phase of said high-intensity discharge lamp.

9. (Currently Amended) The circuit according to claim 1, further comprising a controller configure to:

~~means for determining~~ determine a maximum oscillation period of the resonant circuit based on a maximum value of a capacitance at a secondary side of the transformer when the load is connected;

~~means for choosing~~ choose the on-time of the switch to be higher ~~that~~ than half of said maximum oscillation period.

10. (Previously Presented) The circuit according to claim 1, wherein the off-time of the switch is chosen to be higher than a time necessary to reduce a current through the diode to substantially zero.

11. (Currently Amended) The circuit according to claim 1, further comprising a controller configure to:

~~means for calculating~~ calculate a mean value of a short-circuit current over the on-time and the off-time of the switch for a range of couple factors, and

~~means for selecting~~ select a couple factor for which the mean value is minimal.

12. (Previously Presented) A circuit for providing power to a load comprising:

a transformer having a primary winding and a secondary winding, the load being connected to the secondary winding;

a switch coupled to the primary winding, an on-time and an off-time of the switch being controllable by a control element, for generating a voltage pulse over the primary winding; and

a diode directly connected in parallel to the primary winding for demagnetizing the transformer during the off-time of the switch.

13. (Previously Presented) The circuit of claim 12, further

comprising a capacitor connected in parallel to the secondary winding for adjusting a resonance period of a resonant circuit associated with the secondary winding.

14. (Previously Presented) The circuit of claim 12, wherein the transformer has a couple factor which is smaller than one.

15. (Previously Presented) The circuit of claim 12, wherein the control element is selected to cause the on-time of the switch to be at least half of a resonance frequency of a resonant circuit associated with the secondary winding.

16. (Previously Presented) The circuit of claim 12, wherein the control element is selected to cause the off-time of the switch to be sufficient to reduce a current in the diode to substantially zero during demagnetization of the transformer.

17. (Previously Presented) The circuit of claim 12, further comprising a resistor connected in series with the diode to reduce the off-time.

18. (Previously Presented) The circuit of claim 12, wherein the control element is configured to control the switch to provide a voltage pulse to the primary winding only if a free-running current through the diode is substantially zero.